REMARKS

I. Introduction

Claims 1-6 are currently pending in this application.

Applicants respectfully request reconsideration and request that for the following reasons the rejections should be withdrawn, the application allowed, and the case passed to issue.

II. Claim Rejections under 35 U.S.C. § 102(b)/ 35 U.S.C. § 103(a)

Claims 1, 2, 5 and 6 were rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as unpatentable under Yamamoto WO 2003/044883, (reference will be made to English equivalent US 2004/0101754). Applicants respectfully disagree.

Independent claim 1 recites, in pertinent part,

> a power X-ray diffraction profile of said spherical nickel oxyhydroxide obtained using a Cu target is such that a half-width W of a diffraction peak P derived from a (001) plane is 0.6 ° or less, the ratio H/W of a height H of said peak P to said half-width W is 10,000 or more, and nickel contained in said spherical nickel oxyhydroxide has a mean valence of 2.95 or more.

As an initial matter, Applicants respectfully submit that the rejection under 35 U.S.C. § 102(b) is not appropriate because, as conceded by the Examiner on page 3 of the office action dated February 24, 2009, Yamamoto does not disclose all of the elements recited in claim 1 (i.e. characteristics of the spherical oxyhydroxide.) Furthermore, Applicant's disclosure shows the mean valence, H/W ratio and diffraction peak for spherical oxyhydroxide can be varied, (see Tables 2 and 3), and therefore these **are not inherent and uniform characteristics** as alleged by the Examiner.

Moreover, Yamamoto neither discloses nor suggests specific conditions for producing nickel oxyhydroxide, nor does it disclose or suggest anything with regards to a half-width W of a

diffraction peak P derived from a (001) plane, as well as the ratio H/W of a height H of the peak to the half-width W. Thus, based on this lack of disclosure or suggestion in Yamamoto, a person having ordinary skill in the art would not have found it obvious to achieve the configuration as recited in claim 1.

Additionally, in the present subject matter as recited in claim 1, nickel oxyhydroxide is used as a positive electrode active material of an alkaline primary battery. On the other hand, Yamamoto used nickel oxyhydroxide as a positive electrode active material of a non-aqueous primary battery. Therefore, Applicants submit that the battery reaction of nickel oxyhydroxide as recited in claim 1 is different from that of Yamamoto. Specifically, nickel oxyhydroxide of the type recited in claim 1, reacts as shown in the following reaction formula (1):

$$NiOOH + H_2O + e- \rightarrow Ni(OH)_2 + OH^-$$

That is, since the present subject matter is directed to an alkaline primary battery, an alkaline aqueous solution is used for the electrolyte. At the positive electrode of an alkaline primary battery, nickel oxyhydroxide, water in the alkaline aqueous solution and electrode react with one another to produce nickel hydroxide and OH^-.

In contrast, Yamamoto discloses a **non**-aqueous primary battery, a type of battery whose electrolyte does not contain water. Therefore, in Yamamoto it is not possible for nickel hydroxide to cause a reaction of formula (1) discussed *supra*.

Indeed, a person having ordinary skill in the art would readily understand that if there are differences in battery reactions of nickel oxyhydroxide, the discharge characteristics of nickel oxyhydroxide would differ significantly depending on the kind of reaction that occurs. Due to this, a person having ordinary skill in the art would attempt to optimize the physical properties of nickel oxyhydroxide in accordance with the battery reaction of nickel oxyhydroxide. As such, it

is respectfully submitted that it would not be obvious or even conceivable to a person having ordinary skill in the art to modify Yamamoto (a non-aqueous primary battery) in order to optimize the physical properties of nickel oxyhydroxide used in an alkaline primary battery.

Furthermore, the Examiner concedes that Yamamoto does not disclose nickel having a mean valence of 2.95 or more (claim 1), or 3 or more (claim 2), the power X-ray diffraction profile of the spherical nickel oxyhydroxide having a ratio H/W of 10,000 or more and the diffraction peak from a plane of 0.6° or less. However, the Examiner asserts that these properties are inherent in the beta-type nickel oxyhydroxide material disclosed by Yamamoto.

Moreover, it is respectfully submitted that the battery as recited in claim 1, achieves unexpectedly superior results as shown in Tables 2 and 3. As shown in Table 2, when the diffraction peak P derived from a (001) plane is 0.6 ° or less as claimed, the peak height – crystallinity unexpectedly improves. In addition, as shown in Table 3, batteries having the configuration as recited in claim 1, having a mean valence of nickel contained in nickel hydroxide of 3 or more, have longer discharge durations that other batteries. As such, the battery configuration as recited in claim 1 achieves unexpectedly improved performance.

Therefore, it is clear that Yamamoto fails to teach or suggest all of the elements of claim 1 and a person having ordinary skill in the art would not have found it obvious to modify the cited prior art reference in such a manner as to achieve the unexpectedly improved battery configuration as recited in claim 1. Accordingly, claim 1 is allowable. Furthermore, claims 2-6 depend from and further define the subject matter of claim 1, and therefore are also allowable.

III. Claim Rejections Under 35 U.S.C. § 103(a)

Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yamamoto in view of Hideo et al., EP 0831 542 A1. Applicants respectfully disagree.

The Examiner at page 4 of the office action mailed February 24, 2009, concedes that Yamamoto fails to disclose that the spherical nickel oxyhydroxide carries a cobalt oxide and the cobalt contained in the cobalt oxide has a mean valence of greater than 3, and wherein the cobalt oxide is in the amount of 0.5-15 parts by weight per 100 parts by weight of spherical nickel oxyhydroxide. However, the Examiner now relies on Hideo for this alleged disclosure.

Applicants respectfully submit that, for the reasons discussed above, in reference to the rejection of claim 1, Yamamoto fails to teach or suggest all of the elements of claim 1, and a person having ordinary skill in the art would not have found it obvious to modify Yamamoto in such a manner as to achieve the battery composition and configuration as recited in claim 1.

Furthermore, Hideo fails to cure the deficiencies of Yamamoto, at least because Hideo also fails to teach or suggest "a power X-ray diffraction profile of said spherical nickel oxyhydroxide obtained using a Cu target is such that a half-width W of a diffraction peak P derived from a (001) plane is 0.6 ° or less, the ratio H/W of a height H of said peak P to said half-width W is 10,000 or more, and nickel contained in said spherical nickel oxyhydroxide has a mean valence of 2.95 or more," as recited in claim 1.

Moreover, this configuration achieves unexpectedly superior results as shown in Tables 2 and 3, as discussed above, in reference to claim 1.

In addition, Hideo has the feature of producing, by a hydrothermal reaction of a lithium compound and a complex oxyhydroxide, a positive electrode active material represented by the formula $LiNi_{1-x}Me_xO_2$ (Me: transition material) for a lithium secondary battery, (please see col.

2, lines 20-25). For example, in Example 1 of Hideo, $LiNi_{0.85}Co_{0.15}O_2$ is synthesized by using a suspension that contains $Ni_{0.85}Co_{0.15}OOH$ and lithium hydroxide. In Example 2 of Hideo, $LiNi_{0.85}Mn_{0.15}O_2$ is produced by using a dispersion that contains $Ni_{0.85}Mn_{0.15}OOH$ and lithium acetate.

As such, Hideo uses an oxyhydroxide only as one of the starting materials, and **not** as an active material, as recited in claim 1. Therefore, because Hideo used oxyhydroxide as one of the starting materials and not as an active material, a person having ordinary skill in the art would not have found it obvious or have been motivated to combine Yamamoto and Hideo in order to achieve the battery as recited in claims 3 and 4.

Therefore none of Yamamoto or Hideo, either alone or in combination, teach or suggest all of the elements of claims 1, 3 and 4. Accordingly claims 1, 3 and 4 are allowable. Furthermore, claims 2, 5 and 6 depend from and further define the subject matter of claim 1 and therefore are also allowable.

In view of the above remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,
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